

Attorney Docket: 025251-0355925  
Application No. 10/584,991

#### ABSTRACT

An online payment system and a secure authentication method, including a payment gateway connecting a customer and a merchant over Internet; said payment gateway is responsible for processing payment information from the network, authenticating identities of the customer and the merchant and validating the validity of transaction; after a processing system in the payment gateway confirms the transaction is valid, said payment gateway sends a payment request and informs the two parties in the transaction of the payment information after the payment is accomplished; an assistant customer identity authentication system is arranged between the payment gateway and the customer, which connects the customer to the payment gateway in a non-Internet approach; the payment gateway generates an authorization code dynamically and transfers it to the customer via the assistant customer identity authentication system; the customer enters the authorization code on correct page in the payment gateway to pass identity authentication.